AN/PPS-5D Man-Portable Battlefield Surveillance Radar

Syracuse Research Corporation

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VENDOR DESCRIPTION

The AN/PPS-5D developed by SRC for the U.S. Army is a cost-effective alternative to replacement for aging AN/PPS-5 systems. This upgrade completely replaces the existing electronics while retaining the antenna, tripod, azimuth drive and telescope assemblies. Dramatic improvements have been achieved in performance, reliability and maintainability while reducing size, weight and power consumption. This upgraded system is capable of detecting vehicles to a range of 20km and personnel to 10km, as well as detecting helicopters and boats. A ruggedized laptop computer enables operation up to 50m from the radar set. Targets are displayed graphically on a map background in PPI format with target data (range, bearing and UTM coordinates) in a data block. The graphical user displays simplify radar operation and minimize training requirements. The upgraded AN/PPS-5 is readily integrated into multi-sensor systems and is capable of cuing optical sensors. Built-in test provides go/no-go status and automatic fault isolation without the need for external test equipment. Multiple power supply options are available, including 12 or 24 VDC vehicle power and 85-240VAC, 50-60Hz. Over 50 radars are currently in service with the U.S. Army.

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Business Category: Large Business

GBR

System Characteristics	
Technology	LPI, Pulse Doppler
Operating Frequency	Agile, 16.21 - 16.50 GHz
Weight (w/batteries)	32.3 kg or 71 lbs
Transmit Power	Solid State, 2W
Temperature	Operating -30°C to +50°C Storage -40°C to +55°C
Antenna	37dB, Parabolic Horizontal Polarization
Processing	Pulse Compression FFT CFAR
Data/Control Interface	RS-232
Scan Rate	0, 7.5 and 15°/sec
Coverage	Azimuth Sector Scan 0 to ±90°
Target Classification	Audio
Input Power	18-36 VDC, 40 watts
Continuous Operations on Single Set of Batteries	8 hours

Performance Characteristics	
Detection Range	Personnel 10 km Vehicles 20 km
Accuracy	Range 20 m Azimuth 20 mils
Max. Remote Distance	45 m (>3 km w/ Wireless Option)
Detect Artillery Round Impacts	Yes (Optional Fall of Shot Mode)
Display Latest Target Info for Most Recent Target Set	Yes
Target Capacity	280/sec
Minimum Detectable Radial Velocity	0.13 m/sec
Operational Availability (Ao)	90%
MTBF	3,000 hrs
MTTR	0.4 hrs
Maintainability	BIT to LRU Level

Options	
GPS and Flux Gate Compass	Circular Polarization
Ethernet Remote Interface	Tracker
Wireless Remote Operation	9 - 18 VDC Power Adapter
AC Power Adapter	Long Range Mode (15/30 km)
Fall of Shot Mode	